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# Baboon Study Shows Benefits for Nice Guys, Who Finish 2nd

By JAMES GORMAN

At last, good news for the beta male.

From the wild to Wall Street, as everyone knows, the alpha male runs the show, enjoying power over other males and, as a field biologist might put it, the best access to mating opportunities.

The beta is No. 2 in the wolf pack or the baboon troop, not such a bad position. But conversationally, the term has become an almost derisive label for the nice guy, the good boy all grown up, the husband women look for after the fling with Russell Crowe.

It may now be time to take a step back from alpha worship. Field biologists, the people who gave the culture the alpha/beta trope in the first place, have found there can be a big downside to being No. 1.

Laurence R. Gesquiere, a research associate in the department of ecology and evolutionary biology at Princeton, and colleagues [report in the journal Science](#) that in five troops of wild baboons in Kenya studied over nine years, alpha males showed very high stress levels, as high as those of the lowest-ranking males.

The stress, they suggested, was probably because of the demands of fighting off challengers and guarding access to fertile females. Beta males, who fought less and had considerably less mate guarding to do, had much lower stress levels. They had fewer mating opportunities than the alphas, but they did get some mating in, more than any lower-ranking males. After all, when the alpha gets in another baboon bar fight, who's going to take the girl home?

Behavioral researchers have not ignored the female baboons: other studies have shown that the females have a whole different system of rank, which is inherited from the mother and rarely subject to challenge, so that is one kind of stress they do not have.

The study is both impressive and surprising, said Robert Sapolsky of Stanford who did groundbreaking studies on stress in baboons and was not involved in t



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“What’s cool about this paper is that being an alpha and being a beta are very different experiences physiologically,” Dr. Sapolsky said.

Robert M. Seyfarth of the University of Pennsylvania, who studies baboon and other primate behavior, said, “I think it’s a great paper.”

“It’s a wonderful sample size over many, many years,” said Dr. Seyfarth, who was not part of the new research, and it shows that “the males at the top are under a lot of stress, and there’s a cost.”

Earlier work by Dr. Sapolsky showed that in baboons, the lower the social rank, the greater the stress. The one exception was during periods of instability, when top males faced many challenges and their stress increased. It was good to be king, he found, but a lot better when the realm was quiet.

The new study showed that top-ranking males had higher levels of stress whether the social structure of their group was stable or in tumult. Researchers collected fecal samples to measure levels of stress hormones called glucocorticoids.

Levels of stress are important partly because of the health effects of stress hormones. In the short term, in immediate fight-or-flight situations, the hormones work to energize the individual. Long-term stress levels are a different matter. “In the long term, you fall apart, or are subject to diseases,” said Jeanne Altmann, an emeritus professor of ecology and evolutionary biology at Princeton, and senior author of the new report.

The health effects are unclear for the subjects of the new study. “Wild baboons are getting lots of exercise and not getting cardiovascular disease,” Dr. Altmann said. And baboons do not stay at the top very long.

For humans, chronic long-term high levels of stress hormones can increase the risks of disease or worsen existing diseases. Dr. Sapolsky argued, in a major review paper in 2005 in *Science*, that socioeconomic status in humans, the best equivalent to social rank in other primates, affected health not just because of access to medical care, but because low status meant more chronic stress.

That does not mean that the new findings can be used to draw conclusions about the health of vice presidents and lieutenant governors compared with that of their bosses. “We’re not sort of a strict dominance hierarchy species,” Dr. Sapolsky said. Humans pick and choose among many hierarchies. A low-ranking employee, for instance, might run a youth baseball league, or be the top skydiver in his local club.

While the new study does not have a direct application to human health or social structure, Dr. Sapolsky and Dr. Seyfarth said, it certainly raises questions about possible unstudied costs of being at the top.

And it does suggest some reproductive strategies among baboons that may be worth thinking about for the majority of men who plan for the future, worry about gas mileage and slip out the back when the fighting starts.

What if, Dr. Seyfarth said, the beta males are hanging around and doing “pretty well for a long time, rather than very well for a short time?”